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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,740	12/28/2004	Richard Darryl Jones	7273-0001WOUS	9243
35301 7590 04/29/2008 MCCORMICK, PAULDING & HUBER LLP CITY PLACE II 185 ASYLUM STREET HARTFORD, CT 06103				
EXAMINER YIP, JACK				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/519,740

**Applicant(s)**

JONES ET AL.

**Examiner**

JACK YIP

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 May 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.  
4a) Of the above claim(s) 12 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-11, 13-18 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/S5108)  
Paper No(s)/Mail Date 5/23/2005  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Preliminary Amendment***

1. In response to the amendment filed on 12/28/2004; claim 12 is cancelled; claims 1 - 11 and 13 - 18 are pending.

### ***Claim Objections***

2. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 6 is directed to a method claim, however applicant discloses a structure limitation ("*said first symbols are divided into at least three groups*"). Though, applicant has failed to disclose steps for the method utilizing the at least three groups. The structure limitation has no affected on the method for which the claimed invention employed. It's noted that to be entitled to weight in method claims, the recited-structure limitations therein must affect the method in a manipulative sense, and not to amount to the mere claiming of a use of a particular structure. *Ex parte Pfeiffer*, 1962 C.D. 408 (1961)

3. Claim 18 is objected to under 37 CFR 1.75(c), for being an improper dependent claim. Claim 18 is written as an independent form; however it refers to another set of claims (claim 1 or claim 17). A multiple dependent claim shall be construed to incorporate by reference all the limitations of each of the particular claims in relation to which it is being considered. It's unclear whether claim 18 is an independent claim or a dependent claim.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been

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obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. **Claims 1 - 4, 6, 10 - 11 and 14 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mott et al. (5,269,687) in view of Copperman (5,660,547) and, further in view of Adams (5,131,848).**

[Claim 1]

A test including the following steps:

- (a) providing a screen which can be viewed by the test subject; (Mott, fig 1, 122)
- (b) presenting on said screen a plurality of first symbols scattered over said screen, said first symbols being identical or having one or more differences between them; (Mott, col 4, lines 51 - 53; col 7, lines 30 - 55) while simultaneously presenting on said screen a tracking test (Mott, fig 2) in which the test subject is required to steer a controllable second symbol along a varying route using manual controls; (Mott, col 4, lines 41 - 68; col 5, lines 1 - 7)

Mott further teaches a selected track can be autocross track, a roadway having intersections and signal lights (first symbols), a stunt course, and so on (Mott, col 4, lines 51 - 53). There are different objects (first symbols) on the track such as barriers, cones, buildings, (Mott, col 7, lines 30 - 55) and other player's vehicle (Mott, col 6, lines 49 - 57 - "multiple player's track").

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(c) requiring the test subject to identify one or more preselected characteristics of said first symbols; while simultaneously requiring the test subject to steer said controllable symbol along said varying route; (Mott, col 7, lines 30 - 55)

Mott further teaches a driver is required to identify these objects (first symbols) in order to avoid them to prevent collision and apply appropriate action when encountering objects on the track.

(d) recording the results of the test subject's tracking performance;

(Mott, col 5, lines 51 - 68; col 6, lines 1 - 4)

Mott further teaches an instrument panel that includes a score display, and contains a numeric indicator of the user's performance.

(e) repeating steps a-d many times, but with the disposition of said first symbols on said screen being for each repetition of step (b).

(Mott, col 3, lines 2 - 8; col 5, lines 20 - 21)

Mott further teaches recursive training means for self-improvement for a driver.

Mott teaches a system that allows the user to choose the type of track to run (Mott, col 4, lines 49 - 51). However, Mott does not explicitly teach the claimed feature of providing a random tracking test. However, Copperman teaches a vehicle simulator with a simulated scenario where a computer generates specific events such as random traffic patterns (**random tracking test**), oncoming traffic, cars pulling away from curves, etc (Copperman, col 1, lines 54 - 67).

Therefore, in view of Copperman, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to modify the simulated track described in Mott, by providing a random tracking test as taught by Copperman, since Copperman (Copperman, col 1, lines 65 -

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67) states, that such modification would give the user the feeling of operating the vehicle in traffic and also to test the user's ability to respond appropriately to the computer generated events.

Mott teaches a system that provides different objects on the track such as barriers, cones, buildings, other player's vehicle and signal light. However, Mott does not explicitly teach a system that provides objects that are **randomly scattered** over the screen and that a plurality of objects are presented at a predetermined amount of time. However, Adams teaches a driver testing system wherein images are projected to randomly selected sectors, in random series or sequences, persisting for predetermined time intervals and separated by predetermined time intervals (Adams, col 2, lines 20 - 61). Therefore, in view of Adams, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to modify the simulated driving track described in Mott, by providing randomly scattered objects as taught by Adams, since Adam states (Adam, col 1, lines 58 - 64) that when one or more non- threatening or innocuous situations are sequentially presented to a student driver, followed by one or more threatening situations, a student is required to take some specific and prompt remedial action, and thereby testing the student's reaction time.

The combination of Mott and Copperman do not teach the claimed feature of recording the results of the test subject's identification. Adams teaches the reaction time is measured for identification of objects (Adams, col 4, lines 47 - 64), and a time score can be computed and displayed at a student station (Adams, col 5, lines 15 - 21). Therefore, in view of Adams, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to modify Mott by providing a measured reaction time as taught by Adams, since Adams states (Adams, col 5, lines 15 - 21) that recording the test subject's reaction time provides a permanent record for each student's performance.

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[Claim 2] Mott, Copperman and Adams do not disclose a predetermined period is in the range of 3 - 6 seconds. Instead, Adams teaches a group of inert symbols are present on a display for a predetermined time interval of 2 seconds. (Adams, col 4, lines 65 - 68; col 5, lines 1 - 6)

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to provide predetermined period in the range of 3 - 6 seconds because Applicant has not disclosed that predetermined period in the range of 3 - 6 seconds provides an advantage, is used for a particular purpose, or solves a stated problem. One of an ordinary skill in the art would expect Adams teaching to perform as well with 2 seconds predetermined period, since the number of objects on the screen determines the reaction time for the student. Adams explicitly states that it is easier and **quicker** for a driver to recognize a developing threatening situation where **only one or a few objects are in view**, compared to the situation where visual images of **a large plurality of objects** are seen, and the number and location of the objects are changing randomly and relatively quickly (Adams, col 1, lines 42 - 47).

[Claim 3] Mott and Adams do not disclose explicitly teaches the interval between consecutive tests is approximately 1 second. Instead, Adams teaches a group of inert symbols are present on a display for a predetermined time interval of 2 seconds, before second group of inert symbols is presented (Adams, col 4, lines 65 - 68; col 5, lines 1 - 6). Adams does not explicitly teach there is a time interval between consecutive tests.

However, it is the examiner's position that at the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to provide 1 second time interval between consecutive tests because applicant has not disclosed that provide 1 second time interval between consecutive tests provides an advantage, is used for a particular purpose, or solves a stated problem. One of an ordinary skill in the art would expect Adams teaching to perform as well with no time interval. Since both applicant invention and prior art provides

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consecutive tests for students to responses to the symbols displayed on the screen and time score is computed. (Adams, col 5, lines 15 - 21)

[Claim 4] Mott teaches there are different (groups) objects on the track such as barriers, cones, buildings, (Mott, col 7, lines 30 - 55) and other player's vehicle (multiple player's track - Mott, col 6, lines 49 - 57). Mott further teaches a selected track can be a roadway having intersections and signal lights. (Mott, col 4, lines 49 - 61). A driver is required to identify the difference between each object and react to each object he/she encounters.

[Claim 6] The test as claimed in claim 4 wherein said first symbols are divided into at least three groups. (Mott, col 4, lines 51 - 53; col 7, lines 30 - 55)

[Claim 10, 11] The test is claimed in claim 1 wherein in step (c) the test subject is required to identify said one or more preselected characteristics of said first symbols by making a preselected motor response (Mott, col 4, lines 41 - 68; col 5, lines 1 - 7). Wherein said motor response consists of pressing a switch.

Mott teaches a driver must identify the objects (such as barriers, cones, buildings, other player's vehicle and signal light) on the track, and a player responses to these object by inputs (such as gas, brake and clutch pedals, a gear shift and a steering wheel) (Mott, col 2, lines 58 - 68; col 3, lines 1 - 9).

[Claim 14] The test as claimed in claim 1 wherein said manual controls consists of a steering wheel. (Mott, col 2, lines 58 - 68; col 3, lines 1 - 9)

[Claim 15] The test as claimed in claim 1 wherein said varying route is provided by a curve which moves vertically down the screen. (Mott, figs 3 - 5, Mott teaches a simulated road (curve) moves vertically down the screen.)



[Claim 16] The test as claimed in claim 15 wherein said controllable second symbol consists of an arrow, and in step (c) the test subject is required to steer the arrow so that the point of the arrow remains on the curve.

Mott teaches a user is required to steer the simulated vehicle so that the vehicle remains on the track (Mott, col 4, lines 41 - 67; col 5, lines 1 - 34). However, Mott does not explicitly teach a second symbol is an arrow; instead Mott teaches a second symbol is a simulated vehicle. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to use an arrow instead of a simulated vehicle because applicant has not disclosed that an arrow provides an advantage, is used for a particular purpose, or solves a stated problem. One of an ordinary skill in the art would expect Mott's simulated vehicle would also allow the driver to see the direction of the simulated vehicle is heading.

[Claim 17] The test as claimed in claim 1 further including the following step:

(f) assessing the test subject's test results by comparison with standards established by carrying out identical tests on control subjects of known competence.

Mott teaches a driver's lap time result can compare with driver's best time established from previous laps. (Mott, col 5, lines 51 - 68; col 6, lines 1 - 4)

[Claim 18] A sequence of tests consisting of three tests,  
the first test including the following steps: (See claim 1 rejection)

- (a) providing a screen which can be used by the test subject;
- (b) presenting for a predetermined period on said screen a plurality of first symbols randomly and widely scattered over said screen, said first symbols being identical or having one or more differences between them;
- (c) requiring the test subject to identify one or more preselected characteristics of said first symbols;

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- (d) recording the results of the test subject's identification;
- (e) repeating steps a - d many times, but with the disposition of said first symbols on said screen being varied randomly for each repetition of step b;

said second test including the following steps: (See claim 1 rejection)

- (a) providing a screen which can be viewed by the test subject;
- (b) presenting on said screen a random tracking test in which the test subject is required to steer a controllable second symbol along a varying route using manual controls;
- (c) recording the results of the test subject's tracking performance;
- (d) repeating steps a-c many times;

The third test comprising a test as claimed in claim 1 or claim 17. (See claim 1 rejection)

The combination of Mott, Copperman and Adams do not teach a sequence of tests consisting of three tests. But in view of Mott, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to modify Mott's recursive training to include three tests, so that the user can familiarize with the training course and improves his performance over time.

**7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mott et al. (5,269,687) in view of Copperman (5,660,547) and Adams (5,131,848) as applied to claim 4 above, and further in view of Greenberg et al. (5,103,408)**

The combination of Mott, Copperman and Adams teach a test subject is required to identify objects (signal light) on the screen (See claim 1). However, they do not explicitly teach that horizontal arrows are used as signal lights. However, Greenberg teaches a test requires a subject to identify the direction in which an arrow is pointed (Greenberg, col 4, lines 34 - 50). Therefore, in view of Greenberg, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to modify the objects described in Mott, Copperman, and Adams,

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by providing an "arrow" traffic light. Since "arrow" traffic lights are old and well known in the art for directing the flow of traffic.

**8. Claims 7 - 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mott et al. (5,269,687) in view of Copperman (5,660,547) and Adams (5,131,848) as applied to claim 1 above, and further in view of Ball (WO 99/52419).**

[Claim 7, 8, 9]

Mott teaches the objects (such as barriers, cones, buildings, other player's vehicle and signal light) are identified by applying appropriate action to react to each object the driver encounters. And identify these object using input device such as gas, brake and clutch pedals, a gear shift and a steering wheel. (Mott, col 2, lines 58 - 68) (See claim 1). The combination of Mott, Copperman and Adams do not teach that identification of the characteristic of each object is through voice. However Ball teaches a voice recognition system which facilitates the entry of responses by a test subject (Ball, pg 6, lines 9 - 10). Therefore, in view of Ball, it would have been obvious to one of ordinary skill in the art, at the time of invention was made, to provide the voice recognition for identification of characteristic of objects, since such modification would allow the test subject to record him/her response with ease. It is also the examiner's position that it was also well-known in the art to use a voice-recognition system as an input device.

**9. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mott et al. (5,269,687) in view of Copperman (5,660,547) and Adams (5,131,848) as applied to claim 1 above, and further in view of Huston et al. (6,146,143)**

[Claim 13] Mott, Copperman and Adams fail to teach manual controls that consist of a joystick. However, Huston teaches a system which simulates the operation of a vehicle includes an input device such as joystick (Huston, col 3, lines 48 - 67; col 4, lines 1 - 4). Therefore, in view of Huston, it would have been obvious to one of ordinary skill in the art at the time of invention was made to provide the joystick of Huston with the Mott's system, since joysticks provide flexible control for vehicle simulators.

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***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sinclair et al. (5,589,897) - a method and apparatus for testing individuals having a sub-optimal central field of vision.

Staplin et al. (5,888,074) - a system for testing and evaluating driver situational awareness.

Roenker (5,801,810) - a system for assessing subjects for inadequate visual attention capabilities.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACK YIP whose telephone number is (571)270-5048. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xuan Thai can be reached on (571)272-7147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. Y./

Examiner, Art Unit 3714

4/24/2008

/Cameron Saadat/

Examiner, Art Unit 3714